

COMPRESSOR DEFINITION

Designation	NB 2117GK
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	994DG70

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	115 / 60	[V / Hz]	
4 Application type	Low Back Pressure R404A		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°F)	
5 Motor type	CSIR		
6 Starting torque	HST - High starting torque		
7 Expansion device	Capillary tube or Expansion valve		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	25.7	[kgf/cm ²] (365 psig)	/ °C - °F
9.2 Peak (gauge)	28.7	[kgf/cm ²] (408 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	4.51	[cm ³] (0.275 cu.in)
2.1 Bore [mm]	20.873	
2.2 Stroke [mm]	13.200	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	10.6	[kg] (23.37 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115 V 60 Hz 1~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-55	
3 Start capacitor	145-175(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0635/G9	
6 Start winding resistance	7.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.55	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	25.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	3.10	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
563	142	165	179	2.82	3.82	3.15	0.79	0.92

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		ASHRAE32 Fan			(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	257	65	75	135	2.92	1.73	1.89	0.48	0.56
-35	(-31)	388	98	114	146	2.91	2.61	2.67	0.67	0.78
-30	(-22)	541	136	158	159	2.91	3.66	3.42	0.86	1.00
-25	(-13)	718	181	210	173	2.95	4.88	4.15	1.04	1.21
-20	(- 4)	921	232	270	189	3.01	6.29	4.86	1.22	1.42
-15	(+ 5)	1151	290	337	207	3.10	7.91	5.55	1.40	1.63
-10	(+14)	1409	355	413	227	3.24	9.75	6.22	1.57	1.82

TEST CONDITIONS: @100V50Hz		ASHRAE32 Fan			(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	190	48	56	115	2.80	1.28	1.65	0.42	0.48
-35	(-31)	312	79	91	134	2.83	2.10	2.33	0.59	0.68
-30	(-22)	458	115	134	152	2.87	3.09	3.00	0.76	0.88
-25	(-13)	629	159	184	172	2.93	4.26	3.67	0.92	1.07
-20	(- 4)	827	208	242	192	3.02	5.64	4.32	1.09	1.27
-15	(+ 5)	1054	265	309	212	3.13	7.22	4.97	1.25	1.46
-10	(+14)	1309	330	384	233	3.27	9.04	5.61	1.41	1.64

TEST CONDITIONS: @100V50Hz		ASHRAE32 Fan			(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	123	31	36	96	2.68	0.82	1.31	0.33	0.38
-35	(-31)	236	59	69	122	2.75	1.59	1.92	0.48	0.56
-30	(-22)	375	94	110	146	2.83	2.52	2.54	0.64	0.75
-25	(-13)	540	136	158	170	2.92	3.65	3.17	0.80	0.93
-20	(- 4)	734	185	215	194	3.02	4.99	3.79	0.96	1.11
-15	(+ 5)	957	241	280	217	3.15	6.55	4.42	1.11	1.30
-10	(+14)	1211	305	355	239	3.29	8.34	5.06	1.27	1.48

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		ASHRAE32 Fan			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[W]	[A]
-40	(-40)	299	75	87	157	3.39	2.01	1.88	0.47	0.55
-35	(-31)	450	113	132	171	3.37	3.03	2.65	0.67	0.78
-30	(-22)	627	158	184	185	3.38	4.24	3.39	0.86	0.99
-25	(-13)	833	210	244	202	3.42	5.66	4.12	1.04	1.21
-20	(- 4)	1068	269	313	221	3.49	7.30	4.82	1.22	1.41
-15	(+ 5)	1335	336	391	242	3.60	9.17	5.50	1.39	1.61
-10	(+14)	1634	412	479	266	3.76	11.31	6.16	1.55	1.80

TEST CONDITIONS: @100V60Hz		ASHRAE32 Fan			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[W]	[A]
-40	(-40)	221	56	65	135	3.25	1.48	1.63	0.41	0.48
-35	(-31)	362	91	106	156	3.28	2.43	2.31	0.58	0.68
-30	(-22)	531	134	156	178	3.33	3.58	2.98	0.75	0.87
-25	(-13)	730	184	214	201	3.40	4.95	3.64	0.92	1.07
-20	(- 4)	960	242	281	224	3.50	6.54	4.29	1.08	1.26
-15	(+ 5)	1222	308	358	248	3.63	8.38	4.93	1.24	1.44
-10	(+14)	1519	383	445	273	3.79	10.49	5.56	1.40	1.63

TEST CONDITIONS: @100V60Hz		ASHRAE32 Fan			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[W]	[A]
-40	(-40)	142	36	42	113	3.11	0.95	1.30	0.33	0.38
-35	(-31)	274	69	80	142	3.19	1.84	1.91	0.48	0.56
-30	(-22)	434	109	127	171	3.28	2.93	2.52	0.64	0.74
-25	(-13)	626	158	184	199	3.39	4.24	3.14	0.79	0.92
-20	(- 4)	851	214	249	227	3.51	5.79	3.76	0.95	1.10
-15	(+ 5)	1110	280	325	254	3.65	7.59	4.38	1.10	1.28
-10	(+14)	1404	354	412	280	3.82	9.68	5.01	1.26	1.47

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.03 +0.07/+0.00	[mm]	(0.316" +0.003"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
3.2 DISCHARGE	6.45 +0.10/+0.00	[mm]	(0.254" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.45 +0.10/+0.00	[mm]	(0.254" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		